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ABSTRACT

This paper describes the acquisition of basic economic concepts by two fifth-grade classes in an elementary school through the use of a school store. The paper contains: (1) a review of the literature relating to economics education and the use of simulations; (2) a discussion of two teachers' approaches to teaching economic concepts; and (3) a description of the instruments used to assess the learning of economic concepts. The literature review points to a positive relationship between student participation in simulation programs and the learning of economics and other academic subjects. The first class in the study was involved in simulation experiences and role playing. The class also viewed "Trade-Offs," a public television series on economics education. The second class was actively involved in estimating costs, planning meals, and preparing and serving the food. This class discussed money management. The Primary Test of Economic Understanding (PTEU) was used to assess the economic knowledge gained by the students. The results showed that the class which engaged in estimating costs and preparing meals gained more economic knowledge. (SM)

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THE EFFECTS OF A SCHOOL STORE UPON THE LEARNING OF ECONOMIC CONCEPTS: A COMPARATIVE STUDY OF TWO FIFTH-GRADE CLASSES

by

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the Mid-South Educational Research
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This paper concerns the learning of basic economic concepts by two fifth-grade classes in an elementary school having a school store. This particular elementary school is part of the Jefferson County Public School System, which serves the Louisville metropolitan area. For the past two school years, 1985-86 and 1986-87, a major supermarket chain has supplied a small grocery store which has been set up in one of this elementary school's classrooms. All of the students purchase grocery merchandise with points represented in monetary values. Although this school store is part of a school-wide token economy, it does provide the students with opportunities to learn various academic subject areas, such as economics. This paper contains 1) a review of the literature relating to economics education at the elementary school level and the use of simulations of adult activities and organizations to teach this subject to children, 2) a discussion of the ways these two, fifth-grade teachers instructed their classes in economics, and 3) a description of the instrument used to assess the learning of economic concepts and the statistical method used to analyze these test results.

Literature review

In recent years, elementary school teachers have included economics education in their classroom curricula. To facilitate the elementary school students' learning of economics, schools have set up simulations of adult economic organizations, such as stores and banks. Hansen (1985) maintained that elementary school (kindergarten through grade five) children can indeed learn economic concepts although he observed that the demand for economics education was low in the Minnesota elementary schools when he did his study. Because reading, mathematics, and language arts are the obvious priorities to be taught at the elementary school level, school boards purchase curricula for instruction in the basics, and teachers devote most of the class time to these

basic subjects. If economics is taught at all in the elementary grades, it is part of broader social science curricula taught in the fourth and fifth grades. Moreover, according to Hansen, students are not even tested in the social sciences in the Minnesota schools. The author added that the teachers perceived little need to instruct their students in a subject area in which they would not be tested. Therefore, due to the dearth of curricula and materials for economics education in the elementary grades, a school store may provide students with an opportunity to learn economics which they would otherwise not have.

Schug and Birkey (1985) stated that children's economic reasoning develops in cognitive stages similar to those described by Piaget. They based their research findings upon interviews of seventy children who ranged from four to nine years of age. These children's responses were categorized as unreflective reasoning (highly literal, or tautological) or reemerging reasoning (more able to perceive reciprocal relationships, and more flexible in their responses). The conclusions of these authors were 1) children's response patterns progress from concrete of abstract reasoning, 2) children's concepts of economics are contingent upon their experiences, and 3) appropriate types of economic education vary according to the ages of the children. Although Schug and Birkey concur with Hansen (1985) that all children are capable of learning economics, they consider the intermediate grades (third to fifth) to be the most appropriate time to begin economics education because children in this age group are more able to comprehend economic concepts.

Several elementary school teachers have written articles describing their experiences with school stores. Burkett and Whitfield (1985) stated that school stores provide opportunities for the students to learn mathematics in a way which is relevant for them. Besides learning to apply the four basic operations of arithmetic, elementary school students learn percentages by

computing sales tax and proportions by comparing various quantities of food in order to determine what are the best buys. Quinley (1986) also discussed a class store set up in his class of elementary school hearing impaired students. He assigned his students to various occupational roles for which they received salaries. Each student had his/her own bankbook with checks and deposit slips. Quinley observed that his students learned to balance checkbooks and to budget through this simulated experience.

In another article, Anderson (1986) described a class project in which students arranged packets of papers in an assembly line operation. He noted that those students who were in this demonstration project had significantly higher scores on an instrument with questions concerning short-run versus long-run production, the law of diminishing returns, and fixed versus variable input, than those students who attended only lectures.

Bernes, Dyer, Newcomer, Zjwan (1983) described class simulations of adult economic institutions. Dyer constructed a toy automobile factory in his class; Bernes' class participated in a consumer's convention; and in Newcomer's class the students were involved with a micro-town with banks, stores, and other institutions. All of these teachers expressed satisfaction with such school models, and they stated that their students gained knowledge in economics and other academic subjects.

Consistent with the findings of these studies, Dawson (1983) stated that the most important factor in a student's learning of economics is the subject's relevance for him/her. He mentioned scarcity as an example of an economic concept which affects everyone. Dawson cited studies that elementary school age children do indeed learn and obtain economic information.

Dawson (1983) then discussed an evaluation in the New York City elementary schools. This evaluation consisted of a pretest and a posttest administered to experimental classes in which the teachers were trained in an economics

education workshop and to control classes in which the teachers received no training. The results of this evaluation were that the experimental group's scores not only were significantly higher than the control group, but also their performance was comparable to that of a high school economics class.

To teach elementary school student economics, some schools have implemented programs simulating adult economic activities and institutions. Kourilsky (1983) discussed the Mini-Society Program, which she developed to promote greater economic literacy and understanding in the elementary grades. Through classroom simulations of business and governmental organizations students have an opportunity to: 1) become personally rather than vicariously involved, 2) assume active rather than passive roles, and 3) participate in the decision-making process which affects all of them. Kourilsky observed that the students who have participated in a Mini-Society Program are more interested in economic concepts than are those who have not had such practical experiences. She added that students from every ethnic and socio-economic background benefit from participation in a Mini-Society Program and that many of them acquire an understanding of economic concepts which is on a level comparable to college sophomores.

Other schools have developed and implemented various models of adult institutions, similar to Kourilsky's Mini-Society Program. Bennett (1985) discussed a model of a political and economic system in an elementary school in Carroll County, Maryland. Bennett's evaluation study was concerned with ten, fifth-grade classes which participated in the Micro-Place Program and nine other fifth-grade classes which were very comparable to the experimental classes and which served as the control groups. Within the Micro-Place Program, the students were involved in both government and business. At the beginning of this program, the students received an allotment of tokens, but

later they had to earn more tokens by working in the model's various positions. The students would purchase cards with these tokens. Then these students could buy food, clothing, and shelter with these cards. Within Micro-Place, these fifth graders provided for their simulated families and paid taxes. Student performance was assessed using the following instruments: 1) a combination of Forms A and B of the Basic Economics Test and 2) the Micro-Place Basics Concepts Test, developed by Bennett (1981). Both of these instruments are criterion-referenced tests. The experimental and control groups received the pretest during January and February, and then both groups were posttested in late May and early June. The experimental Micro-Place classes scored significantly higher on the posttests of both instruments.

All of these studies point to a positive relationship between student participation in such simulation programs and the learning of economics and other academic subjects. Moreover, Ortez and Kourilsky (1985) found a positive correlation between student participation in a simulation program and achievement scores in mathematics. The next section of this paper is a discussion of the different approaches taken by the two, fifth-grade teachers at this elementary school to make economics more relevant for their students.

Economics education in the two, fifth-grade classes

Both fifth grade classes had 19 students taking both the pretest and the posttest. Of the two classes, Ms. N's class performed significantly better on the posttest than they did on the pretest while Mr. R's class' mean score declined .79 from the pretest to the posttest. Both teachers took the same university course in economics education, but Ms. N attended many economics education workshops.

Mr. R stated that he involved in class in simulated experiences and role play. His class viewed Trade-Offs, a public television series on economics

education. This series consisted of nine vignettes of children in various economic situations. Mr. R commented that his students could identify with the children in these vignettes and they imitated what they saw. Mr. R added that his students became more interested in economics and asked more questions about the subject.

Ms. N's approach to teaching economics was somewhat different from the one taken by Mr. R. Her students were actively involved in estimating the costs, planning meals, preparing, and serving the food. When here students shopped in the school store, they learned to read labels on the packages and cans in order to compare the values of a particular item by weight and quantity. This class discussed money management, ways to save and spend money wisely. Special class activities included preparing a reception for several managers from the sponsoring supermarket company and planning both Thanksgiving and Christmas dinner menus. Ms. N asked her class to prepare breakfast or lunch for four or six people with twenty dollars.

Ms. N then mentioned several ways in which she integrated economics and shopping in the school store into several academic areas. Her students practiced their arithmetic daily since they had to compute their earnings and their expenditures, including sales tax. They also learned to read merchandise labels and grocery advertisements in the newspapers. In teaching health and nutrition, Ms. N stressed the difference between consuming sweets and soda pop and buying staple foods for the family. In these ways, Ms. N tried to show her students that economics was relevant to other academic subjects and their everyday lives.

Results

The Primary Test of Economic Understanding (PTEU) was used to assess the economic knowledge gained by the students during the school year. According

to Davison and Kilgore (1980), the PTEU was developed to evaluate the effectiveness of economic education in the third through the sixth grades. This instrument was designed to measure certain basic generalizations, understandings, concepts, and sub-concepts which might be taught at the elementary school level. The PTEU's reliability coefficient was established at .78. The authors consider this coefficient to be adequate but not high.

The PTEU consists of sixty-four "yes" and "no" items. However, for use in this school, the PTEU was modified to include only twenty-two items. School personnel omitted those items they considered repetitious or inappropriate.

The pretest mean for Mr. R's class was 17.89, but the posttest mean was 17.10. While Ms. N's class pretest mean of 17.89 was exactly the same as that of Mr. R's class, her class scores had a mean of 19.0 on the posttest. By using a t-test, this gain was significant at the .01 level.

Then a Scheffe Test was performed with the pretest means and the posttest means of both classes. The results of the Scheffe test showed that the posttest mean for Ms. N's class was significant at the .05 level from all other class means.

Conclusion

From the results of the statistical analysis, Ms. N's class seemed to have gained more economic knowledge. Her teaching approach to economics and the school store seemed to be very thorough. Her students seemed to have gained by her relating economics and their experiences in the school store to other academic subjects and in real life situations. Both Mr. R and Ms. N observed that student involvement in a program like a school store contributes to the development of independence and decision-making as well as learning subject matter.

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